

REMARKS

Reconsideration and withdrawal of the rejections set forth in the outstanding Office Action are respectfully requested in view of the following remarks.

Rejection Under 35 U.S.C. 103(a)

The Office Action rejects claims 2 and 6-10 under 35 U.S.C. § 103(a) as being unpatentable over Lindhoff (U.S. Patent No. 6,373,888, hereinafter "LINDHOFF"). Applicant respectfully submits that LINDHOFF does not disclose all of the elements of the claimed invention.

Initially, Applicant notes that independent claim 2 requires the following:

A radio reception apparatus comprising:

- a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

- an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

- a canceller configured to cancel an interference component included in the time unit using the adjusted filter;

- wherein the adjuster comprises:

- a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern; and

- a tap coefficient controller configured to control tap coefficients to set the filter according to the determined modulation scheme.

Applicant submits that LINDHOFF does not disclose at least the recited tap coefficient controller in the claimed invention. LINDHOFF discloses calculating tap channel tap coefficients by "using all of a set of one or more taps associated with the corresponding channel model structure" (LINDHOFF, col. 5, lines 20-26). However, LINDHOFF does not teach controlling "tap coefficient according to the determined modulation scheme" (i.e. the modulation

scheme determined by the recited modulation scheme determiner), as required by the claims.

For this reason alone, LINDHOFF does not disclose all of the elements of the claimed invention.

Furthermore, with regard to the claimed modulation scheme determiner, the Examiner suggests that LINDHOFF teaches the use of a MLSE Viterbi equalizer, which is allegedly “known for using maximum likelihood calculations to determine modulation, where all possible transmitted symbol sequences are considered” (*see* page 3 of the Office Action; LINDHOFF, col. 1, lines 44-56 and col. 6, lines 33-41). However, the claims require that the modulation scheme determiner processes “likelihoods calculated for individual modulation schemes.” In contrast, the MLSE Viterbi equalizer utilizes the Viterbi algorithm, and “hypothesizes various transmitted symbol sequences” based on only the Viterbi algorithm (LINDHOFF, col. 1, lines 35-36). Accordingly, the MLSE Viterbi equalizer does not calculate likelihoods based on a plurality of modulation schemes (i.e., individual modulation schemes), as required by the claims.

Moreover, in claim 10 (and claims 5-9), signals are received and the filter for filtering the received signal is adjusted on a *per time unit basis*. More specifically, claim 10 recites a reception filtering method comprising “receiving a signal on a per time unit basis, the received signal including a known signal pattern on a per predetermined time unit basis” and “adjusting a filter for filtering the received signal using the known signal pattern on a per time unit basis.” Although the Examiner suggests equalizer 406 in Figure 4 of LINDHOFF discloses this feature, the description of equalizer 406 in LINDHOFF does not teach or suggest the above-noted claim feature.

Accordingly, at least for each of the reasons discussed above (and certainly for all of these reasons), Applicant respectfully submits that LINDHOFF does not disclose all of the

elements of the claimed invention, and respectfully requests withdrawal of the rejection over LINDHOFF.

The Office Action also rejects claim 3 under 35 U.S.C. § 103(a) as being unpatentable over LINDHOFF in view of Jayaraman et al. (U.S. Patent Application Publication No. 2003/0087622, hereinafter “JAYARAMAN”). Furthermore, the Office Action rejects claim 4 under 35 U.S.C. § 103(a) as being unpatentable over LINDHOFF in view of Casas et al. (U.S. Patent No. 7,027,500, hereinafter “CASAS”). Lastly, the Office Action rejects claim 5 under 35 U.S.C. § 103(a) as being unpatentable over LINDHOFF in view of Perets et al. (U.S. Patent Application Publication No. 2003/0003889, hereinafter “PERETS”).

In view of the remarks above, Applicant submits that LINDHOFF does not disclose all of the recited features of the claimed invention, and JAYARAMAN, CASAS, and PERETS fail to cure these defects. JAYARAMAN, CASAS, and PERETS do not teach “a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a per predetermined time unit basis” and “an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis.” Furthermore, these publications neither teach “a tap coefficient controller configured to control tap coefficients to set the filter according to the determined modulation scheme” nor “a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern,” as required by the claims. Accordingly, the combination of cited publications do not teach all of the elements of the claims 2, 3, and 4.

In view of the foregoing, Applicant respectfully submits that any proper combination of JAYARAMAN, CASAS, and PERETS, fails to establish a *prima facie* case of obviousness.

Applicant respectfully requests withdrawal of the rejections for obviousness over LINDHOFF in view of JAYARAMAN, CASAS, or PERETS.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections, and an indication of the allowability of all claims pending in the present application in due course.

SUMMARY AND CONCLUSION

For the foregoing reasons, it is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested.

If any extension of time is deemed to be necessary to maintain the pendency of the application, including any extension of time fees for entry of an Examiner's Amendment, the Patent and Trademark Office is hereby requested and authorization is hereby provided to charge any necessary fees to maintain the pendency of this application to Deposit Account No. 19-0089.

If the Examiner has any questions, or wishes to discuss this matter, the Examiner is respectfully invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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